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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,405	02/09/2004	Hiroshi Yoshigi	ASAM.0110	6609

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EXAMINER

BANGACHON, WILLIAM L

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,405

Applicant(s)

YOSHIGI ET AL.

Examiner

William L. Bangachon

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,6 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,6 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/3/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Examiner's comments.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 5-6 and 11-13 have been fully considered but they are not persuasive. The Examiner respectfully traverse applicant's arguments that the cited references or their combinations fail to teach or disclose each and every feature of the present invention as disclosed in the independent claim 5 as follows:

In response to applicant's argument that **“de Vall’s transponder varies the resonant capacitance to an optimum valued depending upon a received frequency”** [page 7, 3rd paragraph], a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use (i.e. **first capacitor is adjusted to have a capacitance smaller than the input capacitance of the IC chip based on the received frequency as applicant argues [page 7, 4th paragraph]**), then it meets the claim.

In response to applicant's argument that **there is no suggestion to combine the references** [page 7, 2nd paragraph], the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one

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of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Mathieu is cited to provide the system of de Vall the flexibility to optimize the resonant capacitance based on the desired resonance.

In response to applicant's argument that **the Examiner's conclusion of obviousness is based upon improper hindsight reasoning** [page 7, 4th paragraph], it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5-6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,608,417 (hereinafter 'de Vall') in view of USP 6,522,308 (hereinafter 'Mathieu').

In claims 5 and 6, de Vall teaches of a contactless identification (transponder) comprising:

an antenna coil (Figure 3b, L');

a first capacitor (C'); and

an IC chip (20) connected to said antenna coil (L') in series through said first capacitor. De Vall do not disclose expressly **“said first capacitor smaller than an input capacitance of said chip which is formed with variations due to**

manufacturing factors, the capacitance of said first capacitor complimenting to said input capacitance of said IC chip to provide a desired resonant capacitance”.

However, since the input capacitance introduced by an IC chip in the manufacture of tags/transponders is inherent, these claim limitations would have been just a matter of obvious design choice in the system of de Vall, to one of ordinary skill in the art. As such, Mathieu, in the same field of endeavor (i.e. transponder chips), suggests that complimenting the effect of the input capacitance of an IC chip in the manufacture of tags/transponders is beneficial {Mathieu, col. 4, lines 22-33+} in order to obtain perfect resonance {Mathieu, col. 4, lines 60-66+}. Further, when the combination of the series and parallel resonance circuit of de Vall shown in figure 2 is taken apart, as shown in figures 3a and 3b of de Vall, a skilled artisan would recognize that either a parallel or series resonance circuit can be used in place of each other to achieve the same result. That is, a designer may place a large capacitor in parallel with the chip 20, as shown in Mathieu {Mathieu, figure 5, col. 4, lines 21-33; de Vall, figure 3a}, or a small capacitor when in series, at a desired resonant frequency {de Vall, figure 3b}. Therefore, it would have been just a matter of obvious design choice to one of ordinary skill in the art at the time of applicant's invention to make the first capacitor of de Vall to be smaller than the input capacitance of the chip 20, to achieve a desired resonant frequency.

In claim 6, clearly, the sum of the parallel resonance capacitance and IC chip input capacitance would be so much larger than the series resonance capacitance, recited in claim 6.

In claim 10, de Vall teach of a base as shown in Figure 1, wherein said antenna coil (6) comprises a metallic pattern formed on said base, and any of said capacitors comprises metallic patterns formed on both sides of said base {col. 3, lines 26+}.

In claim 11, said contactless identification comprises an IC card {de Vall, col. 1, lines 11+}.

In claim 12, said contactless identification comprises a portable terminal {de Vall, col. 7, lines 26-35}. i.e. credit cards are portable.

In 13, de Vall teach that the first capacitor capacitance and an inductance of the antenna coil dominantly determine a resonant frequency of a series circuit including the IC chip, the antenna coil, and the first capacitor as shown in figure 3b.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USP 5,218,189 {Hutchison}, 8 June 1993, is cited in that it teaches of a tag having a plurality of capacitors in series {see whole document}. To achieve a desired resonant frequency, any of the capacitors can be used to model a first capacitor and any of the remaining capacitors can be used to model an input capacitance of the IC chip.

USP 6,147,605 (Vega et al) is cited in that it teaches that the "input capacitance of an IC chip formed due to manufacturing factors must be minimized for optimal use of integrated circuits in electrostatic RFID applications" {Vega et al, col. 9, lines 45-65+}.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Office Contact Information

8. Please note the Examiner's art unit has been changed to 2612.
9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to William Bangachon whose telephone number is **(571)-272-3065**. The Examiner can normally be reached on Monday – Thursday, 8:30 AM – 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wendy Garber can be reached on **(571)-272-7308**. The fax phone numbers for the organization where this application or proceeding is assigned is **571-273-8300**

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for regular and After Final formal communications. The Examiner's fax number is **(571)-273-3065** for informal communications.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



William L. Bangachon
Examiner
Art Unit 2635

June 8, 2006



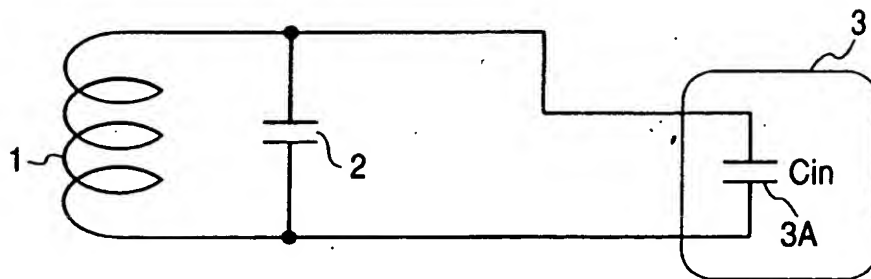
WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600



APPROVED
 5/4/06 [signature]

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Prior Art FIG. 1



Prior Art FIG. 2

IC CHIP INPUT CAPACITANCE		RESONANT FREQUENCY		COMMENTS
Cin(pF)	(DEVIATION)	fres(MHz)	(DEVIATION)	
26	(+30%)	12.38	(-8.7%)	L = 4.59 (μH) C2' = 10 (pF)
20	(0)	13.56	(0)	
14	(-30%)	15.16	(+11.8%)	



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FIG. 9

